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imagery analysis report

New Missile At Dianwei (Tien-wei) SSM Launch Test Site, PRC (TSR)

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NEW MISSILE AT DIANWEI (TIEN-WEI) SSM LAUNCH TEST SITE, PRC (TSR)

1. (TSR) A new missile was observed at the Dianwei (Tien-wei) SSM Launch Test Site in the People's Republic of China (PRC; Figure 1) on imagery acquired during August 1979. The missile, approximately long, is probably a long-range SAM or ABM type.

2. (TSR) On imagery of a light-toned missile on a transporter was observed probably being loaded on the missile launcher; on the missile was attached to the launcher arm. On the missile was no longer present, the launcher arm was elevated to 45 degrees, and possible blast marks indicated that the missile may have been fired.

3. (TSR) On the imagery, when the missile was over the transporter and probably being loaded on the missile launcher (Figure 2), only the front portion of the missile was visible. The missile appeared to be smooth and to increase gradually in diameter from a sharply pointed nose back to a point where the launcher arm totally obscured the missile. A person appeared to be standing on the bed of the transporter on the northeast side of the missile beside a dark-toned band, aft of the missile nose. Two tents, eight trucks, and 30 personnel were in the test site area. On after the missile had been suspended from beneath the launcher arm and the transporter was no longer present (Figure 3), 80 trucks and more than 100 personnel were in the test site area and on the roads extending to the test site. One tent had been removed from near the launcher. No propellant tanks or trucks were observed in the test site area on either date. The absence of propellant vehicles and an analysis of the structural configuration of the missile suggest that the missile was fueled with a solid propellant or a storable liquid propellant. The missile is probably a long-range SAM or an ABM type; however, the possibility that it is an SRBM or a cruise missile cannot be discounted.

4. (TSR) Mensuration of the visible portion of the missile on the imagery (Figure 2) indicated that of the missile were visible forward of and below the launcher arm. The diameter of the missile appeared to increase gradually from the sharply pointed nose to the dark-toned band, aft of the nose. The forward section of the missile, in diameter at the dark band, appeared to be a guidance/warhead section. The diameter of the missile appeared to continually increase from the rear of the dark-toned band back to the point at which the missile was obscured by the launcher arm. The missile was in diameter at the point where it became obscured by the launcher arm. No fins, wings, or other protrusions were discernible on the missile.

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5. (TSR) Mensuration of the missile on the enhanced imagery (Figure 4) indicated that the missile is long overall, with meters forward of the launcher arm, partially visible below the launcher arm, and meters almost totally obscured by the launcher support structure. Analysis of the enhanced imagery indicated that the missile consists of three major sections—a guidance/warhead section, a second-stage/sustainer section, and a first-stage/-booster section (Figure 5).

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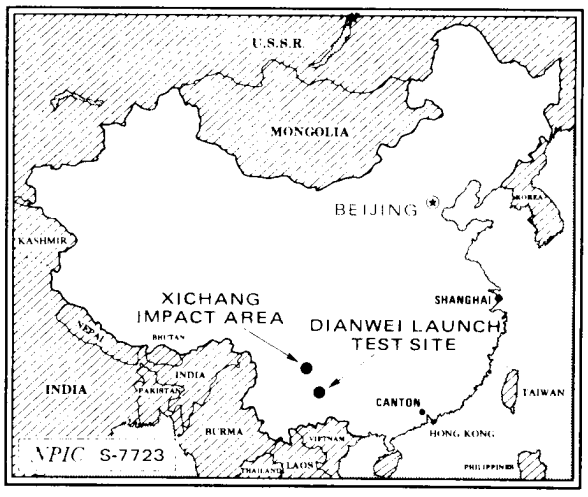

FIGURE 1. LOCATION OF DIANWEI LAUNCH TEST SITE, PRC

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6. (TSR) Measured on the enhanced imagery of [redacted] the guidance/warhead section is [redacted] long and approximately [redacted] meter in diameter. The section increases in diameter from an indistinct nose to a main section, with a relatively constant diameter, that extends back to a point where the missile perceptibly widens at the connection with the second stage. A small [redacted], possible aerodynamic surface/canard was visible on the upper side of the guidance/warhead section, [redacted] meters from the nose. Two or four of these surfaces could have been present; however, resolution and obliquity of the imagery precluded identification of more than one surface. 25X1 25X1 25X1 25X1 25X1

7. (TSR) The second-stage/sustainer section is [redacted] long. This length was derived by measuring from the point where the missile perceptibly widens at the front to a darker toned area on the surface toward the rear. The upper portion of most of this section was obscured by the launcher arm. This section was perceptibly wider along portions of the missile body, which could indicate 25X1

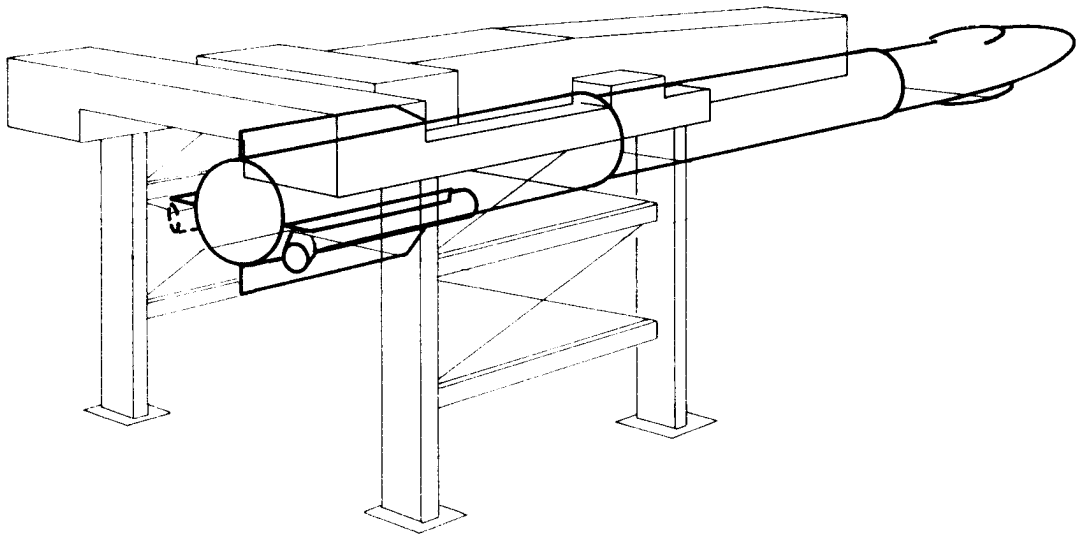

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FIGURE 5. CONCEPTUAL DRAWING OF MISSILE ON LAUNCHER

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the presence of narrow aerodynamic surfaces/stabilizers. However, mensuration could not conclusively substantiate the perceived widening. If a stabilizer was present, the actual diameter of the missile may be less than the measured [redacted]

8. (TSR) The first-stage/booster section measured [redacted] long and was almost totally obscured by the launcher support structure. The length of this section was determined by measuring from the unobscured darker toned area back to some structural shapes discernible in the heavy shadow at the rear of the launcher. Both the darker toned area and the shapes at the rear of the launcher appeared to have a similar tonal quality on the enhanced imagery; mensuration of the structural shapes was not possible. The discernible shapes at the rear of the launcher appeared on the imagery to be two distinct round areas. The larger area, with what appeared to be at least two or three fins/aerodynamic protrusions, was at the end of and in line with the centerline of the missile structure. The smaller area was below and to the right of the apparent end of the missile. This smaller area, which may have been distorted because of halation, was generally in line with the long axis of the bottom edge of the missile. Its location and the fact that it appeared to extend [redacted] beyond the apparent end of the missile suggest that this smaller area may have been a strap-on booster rocket.

9. (TSR) On [redacted] (Figure 6), the missile was no longer present and the launcher arm was elevated to 45 degrees. Enhanced imagery of the area at the rear of the blast deflector was examined to determine if a tonal change observed [redacted] 25X1 25X1 25X1 25X1 indicated that a missile launch had occurred. The point of highest tonal density was examined on each date. The results of this examination were inconclusive, but the tonal densities were sufficiently different to suggest that the missile may have been fired.

10. (TSR) At Dianwei SSM Tracking Facility 1 [redacted] 25X1 the tracking dish was pointed west, away from the launch test site. Three vehicles and four personnel were observed in the facility. On [redacted] 25X1 the tracking dish was pointed north, toward the launch test site. Thirteen vehicles/pieces of equipment, including one possible tracking van, and 12 personnel were observed. On [redacted] 25X1 when the facility was observed on partial coverage, the tracking dish was pointed east and only four vehicles/pieces of equipment were discernible.

11. (TSR) If the missile was fired to an impact area, the Xichang (Hsi-chang) Impact Area [redacted] 25X1 135 nautical miles away on an azimuth of 325 degrees, is the nearest impact area. 25X1 The missile launcher at Dianwei is permanently aligned on an azimuth of 330 degrees.

REFERENCES

IMAGERY

(TSR) Applicable KEYHOLE imagery of [redacted], including digital enhancements of the [redacted] imagery, was used in the preparation of this report. 25X1 25X1

MAPS OR CHARTS

SAC, US Air Target Chart, Series 200, Sheet 0496-12, scale 1:200,000 (UNCLASSIFIED)

REQUIREMENT

Project 130130NS

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] 25X1 Asian Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1

(S) Additional questions concerning imagery enhancement may be directed to [redacted] Applied Photo 25X1 Science Division, Technical Support Group, [redacted] 25X1

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